

HIGH IMPEDANCE ELECTRODE TIP

Abstract

An implantable lead, being either a fixed or retractable/extendable lead,
5 having a distal tip electrode is adapted for implantation on or about the heart and for
connection to a system for monitoring or stimulating cardiac activity. The electrode
includes a mechanical fastener such as a fixation helix for securing the electrode to
cardiac tissue, which may or may not be electrically active. The implantable
electrode with a helical tip includes an electrode which has a distal end and a
10 proximal end. A helix is disposed within the electrode, where the helix is aligned
along a radial axis of the electrode. The electrode further includes one or more of
the following features: the helix having a coating of an insulating material on a
surface of the helix, a porous conductive surface at a base of the helix, or a porous
conductive element at the end of the electrode having an insulating coating covering
15 from 5-95% of the surface of the porous conductive element. The electrode may
further include an electrode tip having a porous electrical conductive element, such
as a mesh screen, disposed on a surface at the distal end of the electrode tip, which
can be used as a sensing or pacing interface with the cardiac tissue.

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